

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An amphiphilic heparin derivative formed from an at least partially N-desulfated heparin and from at least one bile acid, comprising one or more bile acid molecules grafted onto the heparin molecule by an amide bond formed between the terminal carboxylic acid functional group of the bile acid and a primary amine functional group of the heparin, originally present in the heparin or resulting from the N-desulfation, characterized in that wherein the number of bile acid molecules grafted per 100 disaccharide units of the heparin is between about 15 and about 80.
2. (Currently amended) The amphiphilic heparin derivative as claimed in claim 1, characterized in that wherein the number of bile acid molecules grafted per 100 disaccharide units of the heparin is between about 20 and about 60.
3. (Currently amended) The amphiphilic heparin derivative as claimed in claim 1 or 2, characterized in that, wherein the bile acid is chosen from selected from the group consisting of cholic acid, deoxycholic acid, lithocholic acid, cholic acid and chenodeoxycholic acid, and mixtures thereof.
4. (Currently amended) The amphiphilic heparin derivatives as claimed in any one of claims 1 to 3, characterized in that claim 1, wherein said amphiphilic heparin derivative is prepared in calcium, magnesium or sodium salt form.
5. (Currently amended) The amphiphilic heparin derivatives as claimed in any one of claims 1 to 4, characterized in that they claim 1, wherein said amphiphilic heparin derivatives are capable of spontaneously assembling in an aqueous medium to form nanoparticles.
6. (Currently amended) Nanoparticles which can be formed from the amphiphilic heparin derivative as claimed in any one of claims 1 to 5 claim 1.

7. (Currently amended) The nanoparticles as claimed in claim 6, ~~characterized in that their wherein said nanoparticles have an average size is of~~ between 10 nm and 1 μ m.

8. (Currently amended) The nanoparticles as claimed in claim 6 or 7, ~~characterized in that they, wherein said nanoparticles~~ contain one or more inner hydrophobic domains and a hydrophilic outer surface.

9. (Currently amended) The nanoparticles as claimed in ~~any one of claims 6 to 8, characterized in that they claim 6, wherein said nanoparticles~~ additionally contain one or more hydrophobic active ingredients dissolved in its hydrophobic inner domain.

10. (Currently amended) The nanoparticles as claimed in claim 9, ~~characterized in that wherein~~ said active ingredients additionally carry one or more polar groups.

11. (Currently amended) The nanoparticles as claimed in claim 9 or 10, ~~characterized in that, wherein~~ said active ingredients are ~~chosen selected~~ from ~~the group consisting of~~ anti-inflammatory agents, antifungal agents, calcium channel inhibitors and anticancer agents.

12. (Currently amended) ~~The nanoparticles as claimed in any one of claims 9 to 11, as vectors~~ Vectors for active ingredients which can be administered by the oral route comprising the nanoparticle as claimed in claim 9.

13. (Currently amended) ~~The nanoparticles as claimed in any one of claims 9 to 11, as vectors~~ Vectors for active ingredients which make it possible to increase ~~their~~ the absorption of said active ingredients by the intestinal mucosa comprising the nanoparticle as claimed in claim 9.

14. (Currently amended) ~~The nanoparticles as claimed in any one of claims 9 to 11, as vectors~~ Vectors for active ingredients which allow ~~their~~ the gradual release of said active ingredients in the intestinal mucosa comprising the nanoparticle as claimed in claim 9.

15. (Currently amended) The nanoparticles as claimed in ~~any one of claims 6 to 14, characterized in that it exists~~ claim 6, wherein said nanoparticles are in freeze-dried form.

16. (Currently amended) A colloidal suspension in aqueous medium containing the nanoparticles as claimed in ~~any one of claims 6 to 14~~ claim 6.

17. (Currently amended) A pharmaceutical composition comprising the nanoparticles as claimed in ~~any one of claims 9 to 14~~ claim 9, combined with at least one pharmaceutically acceptable excipient.

18. (Currently amended) The pharmaceutical composition as claimed in claim 17, in ~~which the~~ wherein ~~said~~ excipient is chosen to allow administration of active ingredients by the oral route.

19. (Currently amended) The pharmaceutical composition as claimed in claim 18, wherein said composition is in the form of granules, microgranules, tablets, gelatin capsules or solutions to be taken orally.

20. (Currently amended) A method for preparing the amphiphilic heparin derivative as claimed in ~~any one of claims 1 to 5~~ claim 1, comprising the at least partial N-desulfation of a heparin, and then a coupling step which consists in of reacting at least one primary amine functional group of the heparin, originally present or resulting from the N-desulfation, with the terminal carboxylic acid functional group, optionally in activated form, of at least one bile acid.

21. (Currently amended) The method for preparing the amphiphilic heparin derivative as claimed in claim 20, ~~characterized in that~~ wherein the coupling agent used to activate the terminal carboxylic functional group of the bile acid is ~~chosen~~ selected from the group consisting of benzotriazolyloxytris(dimethylamino)phosphonium hexafluorophosphate (BOP), benzotriazolyloxytrispyrrolidinophosphonium hexafluorophosphate (PyBOP) and bromotrispyrrolidinophosphonium hexafluorophosphate (PyBroP).

22. (Currently amended) A method for preparing the nanoparticles as claimed in ~~any one of claims 9 to 14~~, ~~characterized in that~~ claim 9, wherein the active ingredient is incorporated into said nanoparticles by direct dissolution with stirring, by dialysis, by oil/water emulsion or by solvent evaporation.

23. (Currently amended) ~~The use of the nanoparticles as claimed in any one of claims 9 to 14, to increase~~ A method for increasing the solubility of a hydrophobic active ingredient in an aqueous medium comprising incorporating said active ingredient into the nanoparticle as claimed in claim 9.